

WHAT IS CLAIMED IS:

1. A method of forming an artificial Shiro of Matsutake comprising:

5 culturing Matsutake hyphae in a culture substrate containing a substance capable of controlling the cell membrane permeability of the hyphae as an active principle.

2. A method of forming an artificial Shiro of Matsutake comprising:

10 culturing Matsutake hyphae in a culture substrate containing a substance capable of enhancing the hydrophilic property of the hyphae as an active principle.

3. A method of forming an artificial Shiro of Matsutake comprising:

15 culturing Matsutake hyphae in a culture substrate containing a surfactant and/or a natural vegetable oil as an active principle.

4. A method of forming an artificial Shiro of Matsutake comprising:

20 culturing Matsutake hyphae in a culture substrate containing a fatty acid ester as an active principle.

5. A method of forming an artificial Shiro of Matsutake, comprising:

25 inducing growth of Matsutake hyphae by aseptically homogenizing a colony of Matsutake hyphae and aseptically culturing the obtained hyphae in a liquid

nutrient medium;

preparing an inoculum of Matsutake hyphae by  
aseptically replacing the liquid nutrient medium  
containing the growth-induced Matsutake hyphae with a  
5 liquid nutrient medium containing no carbon source; and

culturing aseptically the inoculum of the  
Matsutake hyphae in a culture substrate containing  
a substance capable of controlling the cell membrane  
permeability of the hyphae as an active principle.

10 6. A method of forming an artificial Shiro of  
Matsutake, comprising:

inducing growth of Matsutake hyphae by aseptically  
homogenizing a colony of Matsutake hyphae and  
aseptically culturing the obtained hyphae in a liquid  
15 nutrient medium;

preparing an inoculum of Matsutake hyphae by  
aseptically replacing the liquid nutrient medium  
containing the growth-induced Matsutake hyphae with a  
liquid nutrient medium containing no carbon source; and

20 culturing aseptically the inoculum of the  
Matsutake hyphae in a culture substrate containing a  
substance capable of enhancing the hydrophilic property  
of the hyphae as an active principle.

25 7. A method of forming an artificial Shiro of  
Matsutake, comprising:

inducing growth of Matsutake hyphae by aseptically  
homogenizing a colony of Matsutake hyphae and

aseptically culturing the obtained hyphae in a liquid nutrient medium;

preparing an inoculum of Matsutake hyphae by  
aseptically replacing the liquid nutrient medium  
5 containing the growth-induced Matsutake hyphae with a  
liquid nutrient medium containing no carbon source; and  
culturing aseptically the inoculum of the  
Matsutake hyphae in a culture substrate containing a  
surfactant and/or a natural vegetable oil as an active  
10 principle.

8. A method of forming an artificial Shiro of Matsutake, comprising:

inducing growth of Matsutake hyphae by aseptically  
homogenizing a colony of Matsutake hyphae and  
15 aseptically culturing the obtained hyphae in a liquid  
nutrient medium;

preparing an inoculum of Matsutake hyphae by  
aseptically replacing the liquid nutrient medium  
containing the growth-induced Matsutake hyphae with a  
20 liquid nutrient medium containing no carbon source; and  
culturing aseptically the inoculum of the  
Matsutake hyphae in a culture substrate containing  
a fatty acid ester as an active principle.

9. The method of forming an artificial Shiro of  
25 Matsutake according to claim 1, wherein a solution  
containing the active principle at the concentration  
of 0.2 to 10 wt% is used as the active principle.

10. The method of forming an artificial Shiro of Matsutake according to claim 2, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

5 11. The method of forming an artificial Shiro of Matsutake according to claim 3, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

10 12. The method of forming an artificial Shiro of Matsutake according to claim 4, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

15 13. The method of forming an artificial Shiro of Matsutake according to claim 5, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

20 14. The method of forming an artificial Shiro of Matsutake according to claim 6, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

15. The method of forming an artificial Shiro of Matsutake according to claim 7, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

25 16. The method of forming an artificial Shiro of Matsutake according to claim 8, wherein a solution containing the active principle at the concentration of

0.2 to 10 wt% is used as the active principle.

17. The method of forming an artificial Shiro of Matsutake according to claim 1, wherein a solution containing the active principle which is prepared using  
5 an organic solvent and distilled water is used as the active principle.

18. The method of forming an artificial Shiro of Matsutake according to claim 2, wherein a solution containing the active principle which is prepared using  
10 an organic solvent and distilled water is used as the active principle.

19. The method of forming an artificial Shiro of Matsutake according to claim 3, wherein a solution containing the active principle which is prepared using  
15 an organic solvent and distilled water is used as the active principle.

20. The method of forming an artificial Shiro of Matsutake according to claim 4, wherein a solution containing the active principle which is prepared using  
20 an organic solvent and distilled water is used as the active principle.

21. The method of forming an artificial Shiro of Matsutake according to claim 5, wherein a solution containing the active principle which is prepared using  
25 an organic solvent and distilled water is used as the active principle.

22. The method of forming an artificial Shiro of

Matsutake according to claim 6, wherein a solution containing the active principle which is prepared using an organic solvent and distilled water is used as the active principle.

5           23. The method of forming an artificial Shiro of Matsutake according to claim 7, wherein a solution containing the active principle which is prepared using an organic solvent and distilled water is used as the active principle.

10           24. The method of forming an artificial Shiro of Matsutake according to claim 8, wherein a solution containing the active principle which is prepared using an organic solvent and distilled water is used as the active principle.

15           25. The method of forming an artificial Shiro of Matsutake according to claim 1, wherein either one of soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

20           26. The method of forming an artificial Shiro of Matsutake according to claim 2, wherein either one of soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

25           27. The method of forming an artificial Shiro of Matsutake according to claim 3, wherein either one of soil having a grain size of 3 mm or less and

an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

28. The method of forming an artificial Shiro of Matsutake according to claim 4, wherein either one of  
5 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

29. The method of forming an artificial Shiro of Matsutake according to claim 5, wherein either one of  
10 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

30. The method of forming an artificial Shiro of Matsutake according to claim 6, wherein either one of  
15 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

31. The method of forming an artificial Shiro of Matsutake according to claim 7, wherein either one of  
20 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

32. The method of forming an artificial Shiro of Matsutake according to claim 8, wherein either one of  
25 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

33. The method of forming an artificial Shiro of Matsutake according to claim 1, wherein the active principle is added to the culture substrate in a state of a solution containing the active principle, and  
5 weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

34. The method of forming an artificial Shiro of Matsutake according to claim 2, wherein the active principle is added to the culture substrate in a state  
10 of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

35. The method of forming an artificial Shiro of Matsutake according to claim 3, wherein the active  
15 principle is added to the culture substrate in a state of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

36. The method of forming an artificial Shiro of Matsutake according to claim 4, wherein the active  
20 principle is added to the culture substrate in a state of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

25 37. The method of forming an artificial Shiro of Matsutake according to claim 5, wherein the active principle is added to the culture substrate in a state



of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

38. The method of forming an artificial Shiro of Matsutake according to claim 6, wherein the active principle is added to the culture substrate in a state of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

39. The method of forming an artificial Shiro of Matsutake according to claim 7, wherein the active principle is added to the culture substrate in a state of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

40. The method of forming an artificial Shiro of Matsutake according to claim 8, wherein the active principle is added to the culture substrate in a state of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.